

MAIL ROOM  
15 JUN 11 1979  
PAT. & TRADEMARK OFF.

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NONAPEPTIDE AND DECAPEPTIDE DERIVATIVES OF  
LUTEINIZING HORMONE/RELEASING HORMONE

Abstract of the Disclosure

Nonapeptide and decapeptide analogs of LH-RH of the  
formula  $\text{P}^1(\text{pyro})\text{Glu}-\text{V}-\text{Ser}-\text{W}-\text{X}-\text{Y}-\text{Arg}-\text{Pro}-\text{Z}$  (I)

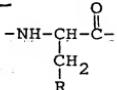
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$\text{P}^1$  is tryptophyl, phenylalanyl or 3-(1-naphthyl)-L-alanyl;

$\text{P}^2$  is tyrosyl, phenylalanyl or 3-(1-pentafluorophenyl)-L-alanyl;

$\text{P}^3$  X is a D-amino acid residue

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TOO10X

wherein R is

(a) a carbocyclic aryl-containing radical selected from the group consisting of naphthyl, anthryl, fluorenlyl, phenanthryl, biphenyl, benzhydryl and phenyl substituted with three or more straight chain lower alkyl groups; or

(b) a saturated carbocyclic radical selected from the group consisting of cyclohexyl substituted with three or more straight chain lower alkyl groups, perhydro-naphthyl, perhydrobiphenyl, perhydro-2,2-diphenylmethyl and adamantyl;

$\text{P}^4$  Y is leucyl, isoleucyl, nor-leucyl or N-methyl-leucyl;

$\text{P}^5$  Z is glycynamide or  $\text{NH}_2\text{R}^1$ , wherein

20 TOO10X  $\text{P}^6$   $\text{R}^1$  is lower alkyl, cycloalkyl, fluoro lower alkyl or

$\text{--NH--C}(\text{O})\text{NH--R}^2$  wherein

$\text{P}^7$   $\text{R}^2$  is hydrogen or lower alkyl,

are disclosed. These compounds exhibit potent LH-RH agonist properties.

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P3201 06/15/79 047661

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